Claims

1. (Currently amended) A ~~stereo~~ sound reproduction system comprising a ~~in combination at least one~~ loudspeaker having at least two electroacoustic drivers mounted in the ~~at least one~~ loudspeaker, said electroacoustic drivers in ~~said~~ the loudspeaker ~~to provide~~ providing non-parallel directivity to sound fields emanating from the at least two electroacoustic drivers, said electroacoustic drivers positioned in the loudspeaker whereby in plan view the ~~driver axes~~ sound field axes cross at a point to cause the sound fields to emanate substantially from said single point in plan view, each sound field having a maximum and minimum less than 180° apart and with ~~a~~ an amplitude gradient there between,

at least two channels from an electric signal source, each of said channels ~~fed to one of said at least two electroacoustic drivers to create~~ associated with the creation of each of said sound fields, said sound fields ~~thereby~~ partially superimposed ~~whereby~~ over an ~~included~~ angle symmetrically located between the ~~maximum and minimum~~ sound fields' maxima or minima, the amplitude gradient of each sound field versus angle ~~changes opposite~~ being complementary to the amplitude gradient of the other sound field.

2. (Currently amended) A method of reproducing ~~stereo~~ sound by creating at least two acoustic energy sound fields emanating in non-parallel directions substantially from a point in space in plan view, said sound fields each having at least one maximum and one minimum less than 180° apart and with an amplitude gradient there between whereby over an ~~included~~ angle symmetrically located between the ~~maximum and minimum~~ sound fields' maxima or minima, the amplitude gradient of each sound field ~~changes opposite~~

versus angle ~~being~~ is complementary to the amplitude gradient of the other sound field ~~when~~ and said sound fields are substantially mirror images of each other.

3. (New) The sound reproduction system of claim 1 wherein the maximum and minimum of each sound field are less than 90° apart.

4. (New) The method of claim 2 wherein the maximum and minimum of each sound field are less than 90° apart.

5. (New) The sound reproduction system of claim 1, including a plurality of said loudspeakers at least partially surrounding a relatively large area of expected listener locations.

6. (New) The method of claim 2 comprising creating a plurality of said mirror imaged sound fields at least partially surrounding a relatively large area of expected listener locations.

7. (New) The sound reproduction system of claim 1 wherein the directions of the maxima and minima of the sound fields are retained over at least two octaves.

8. (New) The method of claim 2 wherein the directions of the maxima and minima of the sound fields are retained over at least two octaves.

9. (New) The sound reproduction system of claim 1 wherein the driver axes cross at a point and cause the sound fields to substantially emanate from said single point.

10. (New) The method of claim 2 wherein the sound fields are positioned with the symmetrically located angle between the corresponding minima less than the symmetrically located angle between the corresponding maxima.

11. (New) The sound reproduction system of claim 1 wherein each of said sound fields is asymmetric about the axis of maximum amplitude of the sound field.

12. (New) The sound reproduction system of claim 11 wherein the asymmetry of at least one sound field is caused by modifying the associated channel signal directed to a driver having an axis non-coincident with the axis of maximum amplitude of the sound field.

13. (New) The sound reproduction system of claim 12 wherein both sound fields are produced by the same two drivers to produce mirror imaged sound fields.

14. (New) The sound reproduction system of claim 12 wherein at least one of the drivers is used to produce both sound fields.

15. (New) The sound reproduction system of claim 14 wherein one of the drivers is a center driver.

16. (New) The sound reproduction system of claim 12 wherein the modification of the associated channel signal is created by modifying a plurality of other channel signals.

17. (New) The sound reproduction system of claim 12 where in the modification of the associated channel signal occurs prior to amplification of the associated channel signal.

In the specification amend the last paragraph on page 34 extending over to page 35 as follows:

FIG. 37 illustrates schematically that a single point loudspeaker having directivity in a right beam 250 and left beam 252 is not limited to the skewed or asymmetric hypercardioid polar patterns. With each beam 250 and 252 having at least one maximum and one minimum a gradient effect over the angle ~~252~~ 254 can be created, however, the effect is not pronounced. Addition of signal processing with the Medianix MED 25006 improves the gradient effect. Further varying the filter and delay between each main driver and the center driver in the single loudspeaker of FIG. 31 causes the forward component of each beam to change thereby changing the ratio of forward to lateral energy and shifting the direction of the maximums of the beams as shown in FIG. 38. In FIG. 38 the forward facing portions of the beams 250 and 252 are depressed at 256 and 258 respectively. While effective with the use of the Medianix MED 25006 or its equivalent, applicant's skewed or asymmetric hypercardioid beams are superior in producing surround sound from a single loudspeaker. In the listening experience the gradient effect in the near field smoothly transitions into the reflected far field in a room setting.